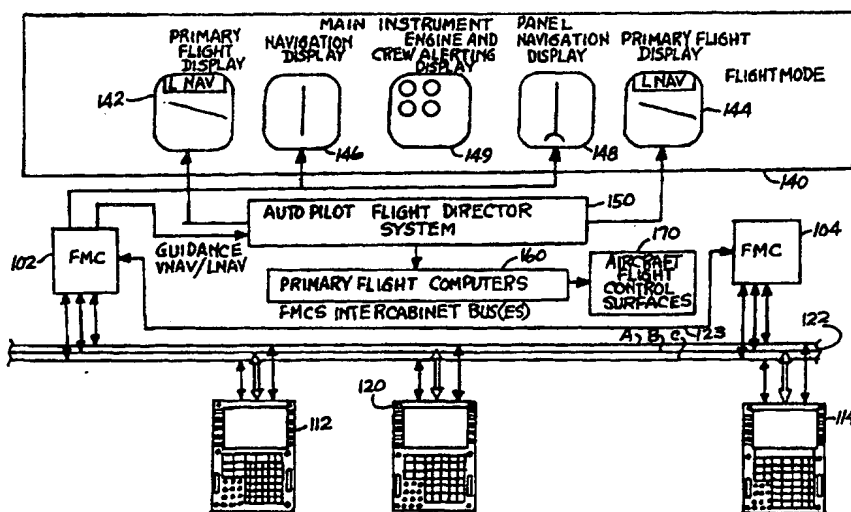




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(54) Title: FLIGHT MANAGEMENT SYSTEM PROVIDING FOR AUTOMATIC CONTROL DISPLAY UNIT BACKUP UTILIZING STRUCTURED DATA ROUTING



(57) Abstract

An improved aircraft flight management system includes a flight management computer (FMC), left and right control display units (CDU's) and a backup CDU. A triple redundant digital databus links the FMC and three CDU's. Upon detecting a failure in either the left or right CDU, the FMC utilizes reconfiguration rules stored in a look-up table to automatically cause the backup CDU to replace the failed CDU in operation, thereby relieving the flight crew of the burden of interfacing to the FMC through only one CDU. Upon detection of a failed databus, the system similarly utilizes structured data routing to reconfigure around the failed databuses. In addition, if any two CDU's have failed in a three CDU system, automatic data rerouting is implemented to the non-failed CDU to insure FMC to CDU communication.

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